

RECEIVED

JUN 06 2019

Stephanie J. Brencel #359489
Leath Ct | A11102B 2809 Airport Rd
Greenwood, SC 29649

June 3, 2019

Dear Honorable Justice ~~W~~ ~~H~~ ~~R~~ ~~E~~ ~~D~~ ~~G~~ ~~E~~ COURT

I do not know if you will ever receive this letter, but I sincerely hope it makes its way to your desk since my case is over. You wrote the majority opinion for my case last may, which I must say, was quite brutal. In the name of science and justice, I wish to share with you the draft of a letter forensic toxicologist, Dr Steven B. Karch is working on to help me with my case. He has spent much time researching and finding actual peer-reviewed, published studies. He strongly feels it is scientifically impossible for me to be guilty of these charges.

(As does Dr. Misha Terplan of the American College of Obstetrics & gynecology.

I understand that some of my actions look bad, but as an RN, I was well aware how chronic pain patients are often judged and treated as criminals, which is exactly what did happen to me. I acted out of fear, and because I did not want to suffer in pain, I wanted my daughter to have the immunity & nutritional benefits of breastmilk, but supplemented with formula half the time to limit her exposure to my meds. I was actually ashamed to admit to Corcoran's investigators just how much formula I used, & underreported the amount of formula I used because I was ashamed I did not solely breastfeed. I researched my meds and monitored my daughter. I made the decision I felt was best for my child. Were my actions that much worse than those of parents who feel it's best not to vaccinate their children?

I do not know what caused my daughter's death, but I never would have knowingly harmed her. The state never investigated any other theories or persons in the home. I've been slandered and my actions twisted to make me look like some kind of horrible drug fiend, which couldn't be farther from the truth. I suffered lifelong injuries (well-documented) in a near-fatal car accident. I know in my heart of hearts I did not cause my daughter's death and

have suffered immensely. First losing my sweet baby girl,
then being accused & convicted of causing her death, I lost
my husband and best friend, Randy to Stage IV throat cancer
in December 2017. I was not there to advocate for his care
or be there for him in his final days. I've lost my home,
savings, business, and missed out on countless milestones
& memories with my children, including 2 HS graduations
and my oldest son's wedding. My youngest, Brandon, now 12,
is essentially an orphan. Haven't I suffered enough? I beg
of you to please, please read the enclosed documentation -
for science's sake, if nothing else,

Thank you for your time and for listening and reading this.

Sincerely,
Stephanie Greene

Stephanie Draft

My name is Steven B. Karch, MD. FFFLM, CSFS (Fellow of the Faculty of Forensic & Legal Medicine of the Royal College of Physicians; Chartered Society of Forensic Sciences, UK). This analysis is written in support of Mrs. Stephanie Green's appeal for early parole. My area of practice focuses specifically on the toxic effects of abused drugs upon the heart. My textbook, (*Karch's Pathology of Drug Abuse*) is now in its 5th edition is recognized as authoritative and used worldwide. Indeed, Dr. Wren, pathologist for the State at the Green trial even asked whether I would personally autograph his copy! At Mrs. Green's trial I testified on her behalf. I have also testified for the defense in three similar cases, including the McKnight case, cited by the Appeals Court in their denial of Mrs. Green's appeal. It is my belief that Mrs. Green should be considered for early parole because she was wrongly convicted at the original trial, and her appeal rejected, based upon provably false evidence.

I am not expert on the legal issues involved in this matter, but I am an expert on forensic toxicology and pathology, and I can recognize "alternate facts" when I see them. Green's conviction was based on totally bogus "expert" testimony that should never have been introduced into any legal proceeding. Green's original conviction occurred in spite of the total absence of evidence that she had anything to do with the morphine found in her daughter. She was convicted because a large amount of morphine was detected in blood taken from the heart of the decedent. The prosecution produced no evidence even suggesting such massive amounts of morphine were administered to the decedent, let alone transferred to the fetus in breast milk. No accepted peer-reviewed study has ever confirmed such transference as even a possibility, let alone plausible, or probable to a reasonable degree of medical or scientific certainty. When it was argued that no such event had ever been reported, witnesses for the State could only counter that there is a "first time for everything."

The Appeals court rejected the final appeal, mainly because Court accepted the opinions of the State's witness as, in fact, true. In the absence of evidence that morphine had been transferred via breastfeeding, the State introduced two other theories: (1) morphine had accumulated in the infant and (2) and that all infants lacked the necessary enzymes to detoxify morphine. Both theories are utterly untrue and have been widely debunked in the scientific peer reviewed literature. Even though there was no scientific evidence, Justice Kitteridge, writing for the majority explained that the Court had to reject Green's appeal because of the scientific testimony given by the State's two experts. , Judge Kittridge stated this very clearly:

The Court: Thus, the testimony of Dr. Eagerton provides evidence that, if believed, is sufficient to survive Appellant's directed verdict motion. The State presented additional evidence. Thus, the testimony of Dr. Eagerton provides

evidence that, if believed, is sufficient to survive Appellant's directed verdict motion. "

But, because Dr. Eagerton's claims are directly and fully contradicted by the accepted science, they should not, under any circumstances, have ever been admitted at trial, and the Appeals Court should have accepted Green's claim. The Court specifically states that if Dr. Eagerton's claims were to be believed, a jury would be perfectly capable of understanding them. The appeals court made no effort to verify the claims made by either side. The jury reached a verdict, because they fully understood the State's claims, never knowing that the statements made by the prosecution's "experts," were false scientifically unsupported claims. Some of the errors are restated in the 2nd appeal ruling are quoted and discussed below.

State: *can a child -can it metabolize drug like an adult dose?*

Answer: Dr. Eagerton: *No, they don't.*

Comment: Both the accepted peer-review literature, and ToxLine, a government database allegedly relied upon both by Drs. Eagerton, and the Court, all state unequivocally that the enzymes needed to metabolize morphine are present in abundance, even prior to birth {McRorie, 1992 #137}. Further, these levels then increase steadily after birth, approaching adult levels by two months {Choonara, 1989 #134}. It is worth noting that the Trial Judge allowed the State to use the word "child" without ever defining it. The appeals court made no effort to verify the claims made by either side.

In addition to observational studies of neonatal metabolism, the ability of the neonate to metabolize morphine has been studied in controlled human clinical studies. Pacifici analyzed 15 peer-reviewed reports {Adamowicz, 2005 #104} and found they all consistently reached the same conclusions: (a) *"the half-life of morphine is longer in the earliest stages of life rapidly decreases as the metabolic pathways develop meaning that the morphine is disposed of more quickly"* {Bhat, 1992 #188}{Lynn, 1987 #142}; (b) *morphine clearance increases rapidly at the same time that it's half-life is decreasing* {Pacifici, 2016 #140}. *The rate at which morphine is cleared from the body increases with age, with median clearances ranging from 5 mL/kg per minute in neonates aged 1 to 7 days, to 21 mL/kg per minute in infants aged 6 months and older. The change in clearance correlates closely with age, as does the formation of morphine metabolites* {Choonara, 1989 #148}. *The ability of the kidneys to clear morphine from the body is independent of age* {McRorie TI, 1992 #146}.

Morphine readily crosses the human placenta before birth {Kopecky, 1999 #145} and approaches adult concentration values in the second month of life. The same article quoted from Toxline by Dr. Wren describes the observed pattern of excretion in a breastfeeding woman who was receiving 4 to 8 mg daily of continuous

intrathecal morphine ((injections of morphine into the covering of the spinal cord, which causes anesthesia). She had her milk sampled 11 times over 7 weeks postpartum. Morphine in milk was undetectable (<8 mcg/L) in 8 of the 11 samples. In 3 of the 11 samples, morphine was detected, but only at levels below the quantification sensitivity of the assay (8 to 25 mcg/L). Using the maximum possible milk level of 25 mcg/L found in this study, an exclusively breastfed infant would receive about 3 mcg/kg daily from the maternal intrathecal morphine dose the mother had given. {McRorie TI, 1992 #146}. Transfer in breast milk simply cannot explain the enormous concentration of morphine in the decedent

"Furthermore, it is well established that morphine itself does not persist in tissues, and 24 hours after the last dose, tissue concentrations are low. Morphine is eliminated by glomerular filtration, primarily as morphine-3-glucuronide; 90% of the total excretion takes place during the first day. Very little morphine is excreted unchanged. Enterohepatic circulation of morphine and its glucuronides occurs, which accounts for the presence of small amounts of morphine in feces and urine for several days after the last dosage {Gilman, 2011 #147}"

The State: *Does a six-week-old child metabolize at all?*

Dr. Eagerton: *No, not typically because it take[s] time for your liver to develop. It takes time for these—the genes that code for these enzymes to turn on and be expressed. And you don't—even a child doesn't metabolize things the same as an adult. Usually you don't—whenever you go through puberty is whenever most of the things that are going to turn on for an adult is (sic) going to turn on.*

Comment: As Elkomy, and many others have observed, "the metabolism of morphine stat: **Morphine is mainly eliminated by hepatic metabolism via glucuronidation to morphine-3-glucuronide (M3G) and morphine-6-glucuronide (M6G) {Yeh, 1977 #149}. The glucuronidation pathway is present, but immature, at birth {Pacifci GM, 1982 #150}{Pacifci, 1989 #151} and reaches maturity sometime between the second week and sixth month of life {Dahlstrom, 1979 #152} {Choonara IA, 1989 #153}**

The State: *"And basically if she was continuously breast feeding and things like that could she reach a level, especially if she didn't metabolize it nearly as fast as the mother, for example, could it reach the level of toxicology – toxicity of the level (sic)."*

Dr. Edgerton: *Yes. And thats one of the things that if you can't metablize it, then the drug may build up in your body and you become – you have a toxic dose whenever you wouldn't normally have a toxic dose.*

Comment: Edgerton's assertion is utterly untrue and the State's reasoning, not based on scientific fact (see discussion above)

The prosecution and the expert witness appear to be equally challenged at public speaking. Worse, the "expert" witness has never even read about the issues actual mechanisms of morphine toxicity in neonates. In fact, it appears that Dr. Eagerton was manufacturing "alternative facts" as he went along. Without his false testimony, I doubt that Mrs. Green would have ever been convicted.

Sincerely,

Steven B. Karch, MD, FFFLM (London), FSSoc

P.O. Box 5139
Berkeley, CA 94705-0139

510-421-7073

Having testified at the trial of Stephanie Green, and having reviewed the transcript of both the trial and appeals court, it is my strong opinion that both should be set aside. I hold this belief for the following reasons.

Steven B. Karch, MD

- (1) While there is evidence that maternal use of morphine can lead to the appearance of insignificant amounts of morphine in the plasma and tissues of a one month old, no peer review paper, published in a reputable scientific journal, has ever linked maternal morphine use in a breast-feeding mother with the death of her child. The statement bears repeating, there is absolutely no scientific evidence that such an event has ever occurred.
- (2) The meager scientific evidence on the topic actually shows quite the opposite. At least two studies have shown that the amount of drug transferred to the child is insignificant [1]. Baka et. al. showed that, of seven volunteers, periodic administration of morphine (via patient controlled anesthesia devices) following a Caesarian Section, four of the women had no detectable morphine. In the remaining three, milk morphine concentrations range from less than 1 ng to 48 ng after two days of intermittent morphine administration. The authors of this study concluded "*The concentrations were found to be very small, thus supporting the safety of breast-feeding in mothers receiving IV patient-controlled analgesia with morphine.*" In a related study, [2], Oberlander reported his observations on the child of a mother being treated with intrathecal 59.9 mg morphine ("spinal anesthesia") for a medical condition unrelated to pregnancy. The infant was breast-fed and followed for 7 months, at which time the child was healthy and no morphine was detected in her milk. Both of these studies contradict testimony by Dr. Edgerton to the effect that studies demonstrating the safety of morphine were based only on short term administration Tr. Pp 357-358
- (3) The paucity of information may explain the less than enlightening explanation offered by Dr. Edgerton when asked by defense if he had "any basis for saying that it (the morphine) came from through the breast milk, to which Dr. Edgerton replied "Had to get into the baby somehow."
- (4) Dr Edgerton also erred when he told the jury that infants cannot metabolize morphine at the same rate as adults and that morphine would have accumulate to the toxic levels seen in the decedent. Tr. Pp. 360-361; pg 400. This is an outdated view. More recent, much more precise, studies have shown that the liver of the fetus can metabolize morphine very nearly at adult levels [3]. Dr. Bell made the same incorrect, outdated, assertion Tr. P 260 and 10-15.
- (5) I believe that the trial court erred by not considering a possible genetic aberration as a possible cause, particularly when I specifically brought it to their attention. Mutations are recognized in the enzymes required for the infant to metabolize morphine [4]. This affliction can be diagnosed with the

technology available at the time of autopsy. Not considering alternative causation suggest to me, at least, that the defendant was denied a fair hearing [5]. Other cases have been reported as well [6], and the overall consensus of the medical community is that as many as 20 percent of SIDS cases are due to a genetic error [7].

- (6) Given the paucity of data about all drugs in breast milk, it is customary to estimate infant exposure to maternal medications by relying upon reported milk-to-maternal plasma drug concentration ratios, maternal plasma drug levels, and the volume of milk consumed over a given time by a normal child [8]. I believe that any laboratory certifying organization would consider that failing to determine these ratios (or even measured the mothers blood, let alone breast milk, would not conform to best practices standard.
- (7) Both the trial transcript and appellate court ruling misstate my testimony at the trial. I did refer to a very famous case where a child was indeed poisoned by breast milk, but only because the mother had a genetic defect (she had been prescribed codeine which the body partially converts to morphine). The defect was quickly diagnosed and confirmed with the appropriate genetic testing. All charges against the mother were dismissed [5]. However the drug concentration in that case was 84 ng/ml, which amounts to. I never said any dead infant had ever been found to have a blood concentration of .520 mg/L, as the contention is clearly absurd. A concentration of .520 mg/L translates to a concentration of 520 nanograms per milliter. The 84 nanograms per milliter I referred to would amount to not quite ONE-TENTH the amount report by the State's laboratory.

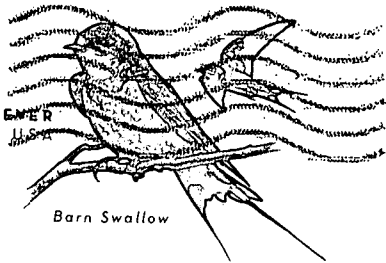
References:

1. Baka, N.E., et al., *Colostrum morphine concentrations during postcesarean intravenous patient-controlled analgesia*. *Anesth Analg*, 2002. **94**(1): p. 184-7, table of contents.
2. Oberlander, T.F., et al., *Prenatal and breast milk morphine exposure following maternal intrathecal morphine treatment*. *J Hum Lact*, 2000. **16**(2): p. 137-42.
3. Garland, M., et al., *Fetal morphine metabolism and clearance are constant during late gestation*. *Drug Metab Dispos*, 2006. **34**(4): p. 636-46.
4. Holthe, M., et al., *Sequence variations in the UDP-glucuronosyltransferase 2B7 (UGT2B7) gene: identification of 10 novel single nucleotide polymorphisms (SNPs) and analysis of their relevance to morphine glucuronidation in cancer patients*. *Pharmacogenomics J*, 2003. **3**(1): p. 17-26.
5. Koren, G., et al., *Pharmacogenetics of morphine poisoning in a breastfed neonate of a codeine-prescribed mother*. *Lancet*, 2006. **368**(9536): p. 704.
6. Ferreiros, N., et al., *Fatal and severe codeine intoxication in 3-year-old twins--interpretation of drug and metabolite concentrations*. *Int J Legal Med*, 2009. **123**(5): p. 387-94.

Stephanie J. Greenel #359489
Leath Correctional Inst. 1A4, 102B
2809 Airport Rd
Greenwood, SC 29649

GREENVILLE SC 296

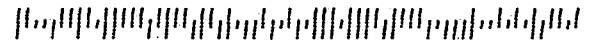
04 JUN 2013 PM 4 1 FOREVER
U.S.



Barn Swallow

Supreme Court of SC
The Honorable Justice Kittredge
P.O. Box 11330
Columbia, SC 29211

29211-133030





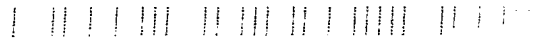
RECEIVED

JUN 04 2019

**LEATH
MAIL ROOM**

THE DEPARTMENT OF CORRECTIONS MAILROOM
NEITHER CENSORED NOR INSPECTED THIS
ITEM THEREFORE THE DEPARTMENT DOES NOT
ASSUME RESPONSIBILITY FOR ITS CONTENTS

PATRICIA YELDELL, WARDEN
LEATH CORRECTIONAL INSTITUTION
SD DEPARTMENT OF CORRECTIONS



THIS ENVELOPE IS RECYCLABLE AND MADE WITH 30% POST CONSUMER CONTENT



© USPS 2016